*Chapter 19 379-386 by: john Land*

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| **State Standards**  **Grade 1: Standard 1 Mathematical Process**  GLE 0106.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning.  CFU: 0106.1.2 Read and write time to hour, half hour, and quarter hour.  CFU:0106.1.3Compare units of time.  CFU:0106.1.4 Count the value of a set of coins up to fifty cents.  **Grade 2: Standard Mathematical Process**  GLE 0206.1.1 Use mathematical language, symbols, and definitions while developing mathematical reasoning.  CFU:0206.1.1 Read and write time up to five minute intervals.  GLE:0206.1.2 Apply and adapt a variety of appropriate strategies to problem solving, including estimation, and reasonableness of the solution.  CFU: 0206.1.3 Use strategies to make estimates of time.  CFU:0206.1.5 Count the value of a set of coins up to one dollar and use the transitive property of equality to recognize equivalent forms of values up to $1.00.  **Grade 4: Standard 4 Geometry and Measurement**  CFU:0406.4.8 Recognize that a measure of area represents the total number of same-sized units/that cover the shape without gaps or overlaps.  **Grade 3: Standard 1 Mathematical Processes**  SPI: 0306.1.2 Solve problems involving elapsed time.  **Objective: I can read the time on a digital or analog clock.** | |
| [http://images-partners-tbn.google.com/images?q=tbn:ANd9GcReji-LGEfqugS2HNTTYh9rtlFyLdczcQWvNDVVjZUFrAf5m3b0BRG1iQ:http://www.toysandbooks.com/Spring_2007_Newsletter/AsecondIsA_h425.jpg](http://www.toysandbooks.com/Spring_2007_Newsletter/Spring_2007_Newsletter.html) | 10 minutes  Activity 1: Have the class sit perfectly still for one full minute with no talking. Then ask them how long that minute felt. Next allow them to get up and roam around talking to whoever they want for a full minute. Stop the class and ask them how long that minute felt. Then have them sit down.  Activity 2: Ask the students to give examples of things you can do in a second, minute, hour, day, week, month, and a year. Have students make a chart in their journal for 24 hours and have them fill it out. Revisit the charts the next day to see how they spent their time. Remind students to pay close attention to the time when they start an activity writing it down so they don’t forget. |

[**http://www.online-stopwatch.com/countdown-timer/**](http://www.online-stopwatch.com/countdown-timer/)

**explain the be ready for the bell game and start it.**

**Virtual Manipulatives:**

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| **Match clocks-** [**http://nlvm.usu.edu/en/nav/frames\_asid\_317\_g\_1\_t\_4.html?from=category\_g\_1\_t\_4.html**](http://nlvm.usu.edu/en/nav/frames_asid_317_g_1_t_4.html?from=category_g_1_t_4.html)  An interactive manipulative that has you match the time on either an analog clock to a digital clock or vice versa. It gives you the ability to self-assess and click for new problems.  3 minutes |
| Bang on time-  <http://www.oswego.org/ocsd-web/games/BangOnTime/clockwordres.html>  An interactive manipulative that tells you a time and you have to stop the clock on the analog clock when it reaches the time. Speed of the hands can be changed to match person’s level. It also keeps score so you can turn it into a game or post high scores on the board for the week. I also like it because it uses all types of time telling lingo.  3 minutes |

*Part I: Activity 19.17 Be Ready for the Bell*

*Give students a recording sheet with a set of blank clock faces. Secretly set a timer to go off at various times. When the bell rings, students should look up and record the time on the clock face and in numerals. This activity is very engaging and motivates students to not only think about telling time, but consider the relationship between the analog clock reading and digital recording.*

*4 minutes*

*Activity 19.18 One-Handed Clocks*

*Prepare a page of blank clock faces. On each clock draw an hour hand. Include placements that are approximately a quarter past the hour, a quarter until the hour, half past the hour, and some that are close to but not on the hour. For each clock face, the students’ task is to write the digital time and draw a minute hand on the clock where they think it would be. This can be a good assessment strategy I feel.*

*5minutes*

*Figure 19.13 Elapsed Time*

*Use an empty time line and present a question, model how we can count full hours and then add up the partial hours to get our answer. Question 1: Your flight takes off at 11:30 am. And lands at 4:15 pm. How long were you in the air? Next have a student come up and model a blank timeline with question 2: You start playing a video game at 9:45 am. And beat it at 2:00 pm. How long did it take you to beat the game?*

*5 minutes*

*Activity 19.14 – Capacity Sort*

*Use a variety of labeled containers, marking one as the “target.” Have students sort the containers into 3 groups, ones that hold more, ones that hold less, and ones that hold about the same as the target. Record your answers based on visual only. Next fill the “target” container with rice to the line, and then pour it into the other containers to find out if they hold more, less, or the same as the target container. Then have students record their answers in the second column. Draw a T chart on the board and label each container, have class copy the chart into their math journals.*

*5 minutes*

*Activity 19.10 – Fill & Compare: Area*

*Draw two rectangles and a blob shape on a piece of paper. Make all three look very similar in size but not the same. The students make a prediction as to which have the largest area down to the smallest. After recording their estimates the students use filler to check their predictions. Then have the students write out why the predicted the way they did, if their predictions were correct, and what they learned in their math journals.*

*5 minutes*

*Activity 19.12 Fixed Perimeters*

*Give students a piece of centimeter grid paper and ask students to find rectangles with perimeter of 24 cm. Have students draw 2 different rectangles. As an extension to this activity I would have students draw two simple polygons (two dimensional shapes that have straight lines, no curves).*

*4 minutes*

*Activity 19.19 Money skip counts*

*Explain to students that they will start skip-counting by one number and at my signal they will shift to a count by a different number. Start with two numbers and always use larger number first. For this activity we will use 10 and 5. For an extension follow the same steps and add a third number.*

*4 minutes*

*Extra virtual manipulative I found:* [*http://www.mrnussbaum.com/bedtime/index.html*](http://www.mrnussbaum.com/bedtime/index.html)

Part II. Telling time: hours

In this lesson plan it starts by giving some background and had one very good point in it. Students need to be able to count to sixty to understand the concept of time, since there are sixty seconds in a minute, and minutes in an hour. Then the teacher leads a discussion about how a clock looks with numbers on it, tick marks, and explains it to them. They then explain how the hands move and which represents hours, and which represents minutes. During this have students point to the parts, and ask them what they can do in a minute. What they can do in a second? What they can do in an hour? Then talk about the different time pieces there are and have the students go home and count how many are in their home.

<http://www.time-for-time.com/lesson1.htm>